

CLAIM AMENDMENTS

Please add the following new claims:

- 270. The method of claim 258, wherein said growth factor comprises a cell and said cell is placed adjacent to said dead portion of said heart.
- 271. The method of claim 259, wherein said growth factor comprises a cell and said cell is placed adjacent to said damaged portion of said heart.
- 272. The method of claim 265, wherein said stem cell is injected into said heart.
- 273. The method of claim 267, wherein said stem cell is injected into said heart.
- 274. The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by intravenous injection.
- 275. The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by intravenous injection.
- 276. The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by intraluminal injection.
- 277. The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by intraluminal injection.
- 278. The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by an angioplasty balloon.
- 279. The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by an angioplasty balloon.
- 280. The method of claim 236 further comprising calculating blood flow through said newly grown artery.

281. The method of claim 238 further comprising calculating blood flow through said newly grown artery.
282. The method of claim 239 further comprising calculating blood flow through said newly grown artery.
283. The method of claim 236 further comprising observing said newly grown artery.
284. The method of claim 238 further comprising observing said newly grown artery.
285. The method of claim 239 further comprising observing said newly grown artery.
286. A method of repairing a dead portion of a pre-existing heart comprising the steps of placing stem cells adjacent said dead portion; forming a new artery in said heart, thereby causing said dead portion of said heart to be repaired.
287. A method of repairing a damaged portion of a pre-existing heart comprising the steps of placing stem cells adjacent said damaged portion; forming a new artery in said heart, thereby causing said damaged portion of said heart to be repaired.

CLAIMS LISTING

Claims 1-5 (canceled)

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| Claim 6 (withdrawn) | A method for producing a desired hard tissue in a body of a human patient comprising placing a growth factor in said body to form a bud which grows into said desired hard tissue. |
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| Claim 7 (withdrawn) | The method of claim 6, wherein said hard tissue comprises a tooth. |
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| Claim 8 (withdrawn) | The method of claim 6, wherein said hard tissue comprises a bone. |
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| Claim 9 (withdrawn) | A method for producing a desired hard tissue in a body of a human patient comprising producing a bud with use of a growth factor and then placing said bud into said body so that said bud grows into said desired hard tissue. |
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| Claim 10 (withdrawn) | The method of claim 9, wherein said growth factor comprises genetically produced living material. |
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| Claim 11 (withdrawn) | The method of claim 9, further comprising placing a growth factor proximate to said bud after said bud is placed in said body. |
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| Claim 12 (withdrawn) | The method of claim 9, wherein said hard tissue comprises a tooth. |
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| Claim 13 (withdrawn) | The method of claim 9, wherein said hard tissue comprises bone. |
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| Claim 14 (withdrawn) | The method of claim 13, wherein said bone is a complete bone. |
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| Claim 15 (withdrawn) | A method for producing a desired soft tissue in a body of a human patient comprising placing a growth factor in said body to form a bud which grows into said desired soft tissue. |
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| Claim 16 (withdrawn) | The method of claim 15, wherein said soft tissue comprises mesodermal tissue. |
| Claim 17 (withdrawn) | The method of claim 15, wherein said soft tissue comprises ectodermal tissue. |
| Claim 18 (withdrawn) | A method for producing a desired soft tissue in the body of a human patient comprising producing a bud with use of growth factor and then placing said bud into said body so that said bud grows into said desired soft tissue. |
| Claim 19 (withdrawn) | The method of claim 18, wherein said growth factor comprises genetically produced living material. |
| Claim 20 (withdrawn) | The method of claim 18, further comprising placing a growth factor proximate to said bud after said bud is placed into said body. |
| Claim 21 (withdrawn) | The method of claim 18, wherein said soft tissue comprises mesodermal tissue. |
| Claim 22 (withdrawn) | The method of claim 18, wherein said soft tissue comprises ectodermal tissue. |
| Claim 23 (withdrawn) | A method of producing a human bud comprising producing a bud with use of a growth factor outside the body of a human. |
| Claim 24 (withdrawn) | The method of claim 23, wherein said growth factor comprises genetically produced living material. |
| Claim 25 (withdrawn) | The method of claim 23, wherein said growth factor comprises a tooth bud. |

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| Claim 26 (withdrawn) | The method of claim 23, wherein said growth factor comprises a bone bud. |
| Claim 27 (withdrawn) | The method of claim 24, wherein said growth factor comprises a tooth bud. |
| Claim 28 (withdrawn) | The method of claim 24, wherein said growth factor comprises a bone bud. |
| Claim 29 (withdrawn) | A method of reviving a dead portion of a pre-existing organ comprising placing a growth factor at a selected area of a patient to form an artery thereby causing said dead portion of said organ to be revived. |
| Claim 30 (withdrawn) | The method of claim 29, wherein said organ comprises a brain. |
| Claim 31 (withdrawn) | The method of claim 29 further comprising inserting a gene at said selected area to stop further artery formation. |
| Claim 32 (withdrawn) | The method of claim 29 further comprising inserting a growth factor at said selected area to stop further artery formation. |
| Claim 33 (withdrawn) | The method of claim 29 further comprising inserting an extracellular matrix to stop further artery formation. |
| Claim 34 (withdrawn) | The method of claim 31 further comprising controlling said gene with use of a genetic switch. |
| Claim 35 (withdrawn) | The method of claim 31, wherein said organ comprises a heart. |

- Claim 36 (withdrawn) A method of replacing a dead portion of a pre-existing organ in a body of a patient comprising placing a muscle growing agent selected from the group consisting of cells, genes, and cells and genes adjacent to said dead portion to grow new muscle and placing genetic material adjacent to said dead portion to grow new arteries thereby growing a new portion of said organ; and then replacing said dead portion with said new portion.
- Claim 37 (withdrawn) The method of claim 36, wherein said dead portion is replaced by removing said dead organ portion and replacing it with said new portion.
- Claim 38 (withdrawn) The method of claim 36, wherein said dead portion is replaced by integrating said new portion into said dead portion.
- Claim 39 (withdrawn) The method of claim 36, wherein said organ comprises a heart.
- Claim 40 (withdrawn) The method of claim 36, wherein said muscle growing agent comprises a cell.
- Claim 41 (withdrawn) The method of claim 36, wherein said muscle growing agent comprises a gene.
- Claim 42 (withdrawn) The method of claim 36, wherein said muscle growing agent comprises a cell and a gene.
- Claim 43 (withdrawn) The method of claim 36 further comprising inserting a gene at said selected area to stop further muscle growth.
- Claim 44 (withdrawn) The method of claim 36 further comprising inserting a growth factor at said selected area to stop further muscle growth.

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| Claim 45 (withdrawn) | The method of claim 36 further comprising inserting an extracellular matrix at said selected area to stop further muscle growth. |
| Claim 46 (withdrawn) | A live organ comprising a pre-existing portion and a formerly dead portion that has been revived. |
| Claim 47 (withdrawn) | The organ of claim 46, wherein said organ is a heart. |
| Claim 48 (withdrawn) | The organ of claim 46, wherein said organ is a brain. |
| Claim 49 (withdrawn) | A live organ comprising a pre-existing portion and a newly grown muscle portion that replaced a dead portion of said organ. |
| Claim 50 (withdrawn) | The organ of claim 49, wherein said organ is a heart. |
| Claim 51 (withdrawn) | A live organ comprising a pre-existing portion and a newly grown portion. |
| Claim 52 (withdrawn) | The live organ of claim 51, wherein said organ is a heart. |
| Claim 53 (withdrawn) | The live heart of claim 52, wherein said pre-existing and said new portions comprise a pump. |
| Claim 54 (withdrawn) | The method of claim 53, wherein said pump comprises a two-chambered pump. |
| Claim 55 (withdrawn) | A method of treating a burn wound in a patient comprising applying genetic material to a burned area to grow an organ and adjacent tissue. |
| Claim 56 (withdrawn) | The method of claim 55, wherein said genetic material comprises a growth factor. |
| Claim 57 (withdrawn) | The method of claim 55, wherein said genetic material comprises a gene. |

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| Claim 58 (withdrawn) | The method of claim 55, further comprising controlling said genetic material with use of a genetic switch. |
| Claim 59 (withdrawn) | The method of claim 57, wherein said gene comprises muscle gene, fat gene, blood vessel gene, and skin gene. |
| Claim 60 (withdrawn) | The method of claim 59, wherein said genes comprise mesodermal genes. |
| Claim 61 (withdrawn) | The method of claim 59, wherein said genes are applied in the order specified above. |
| Claim 62 (withdrawn) | The method of claim 59, wherein said genes are applied simultaneously. |
| Claim 63 (withdrawn) | The method of claim 55, wherein said genetic material is sprayed onto said burned area. |
| Claim 64 (withdrawn) | A method of forming tissue comprising providing a cell and adding a growth factor to said cell to cause dedifferentiation of said cell into a germinal cell, redifferentiation of said germinal cell into a desired cell, and morphogenesis of said desired cell into tissue. |
| Claim 65 (withdrawn) | The method of claim 64, further comprising controlling a gene with use of a genetic switch. |
| Claim 66 (withdrawn) | The method of claim 64, wherein said tissue comprises an organ. |
| Claim 67 (withdrawn) | The method of claim 66, wherein said organ comprises a heart. |
| Claim 68 (withdrawn) | The method of claim 66, wherein said organ comprises an artery. |
| Claim 69 (withdrawn) | The method of claim 64, wherein said tissue comprises function specific tissue. |

- Claim 70 (withdrawn) The method of claim 69, wherein said function specific tissue comprises pancreatic Islet cells.
- Claim 71 (withdrawn) The method of claim 64, wherein said cell is obtained from a patient.
- Claim 72 (withdrawn) The method of claim 71, wherein said cell is a skin cell of said patient.
- Claim 73 (withdrawn) The method of claim 64, wherein said cell is a universal donor cell.
- Claim 74 (withdrawn) The method of claim 64, wherein said growth factor is added to said cell in a cell nutrient culture.
- Claim 75 (withdrawn) The method of claim 64 further comprising replanting said tissue into the body of a patient at a stage of morphogenesis.
- Claim 76 (withdrawn) The method of claim 75, wherein said stage of morphogenesis is when morphogenesis is concluded.
- Claim 77 (withdrawn) The method of claim 64, wherein said germinal cell comprises a stem cell.
- Claim 78 (withdrawn) A method of forming tissue comprising providing a germinal cell and adding a growth factor to said cell to cause direct differentiation and morphogenesis into tissue.
- Claim 79 (withdrawn) The method of claim 78, further comprising controlling a gene with use of a genetic switch.
- Claim 80 (withdrawn) The method of claim 78, wherein said germinal cell comprises a stem cell.
- Claim 81 (withdrawn) The method of claim 78, wherein said tissue comprises an organ.

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| Claim 82 (withdrawn) | The method of claim 78, wherein said tissue comprises function specific tissue. |
| Claim 83 (withdrawn) | The method of claim 78, wherein said tissue is formed in vivo. |
| Claim 84 (withdrawn) | The method of claim 78, wherein said tissue is formed ex vivo. |
| Claim 85 (withdrawn) | The method of claim 78, wherein said tissue is formed in vitro. |
| Claim 86 (withdrawn) | A method of forming a germinal cell comprising providing a cell and adding a growth factor to said cell to cause dedifferentiation of said cell into a germinal cell. |
| Claim 87 (withdrawn) | The method of claim 86, wherein said germinal cell comprises a stem cell. |
| Claim 88 (withdrawn) | The method of claim 86, further comprising adding cell nutrient culture with said growth factor. |
| Claim 89 (withdrawn) | The method of claim 86, further comprising adding physiological nutrient culture with said growth factor. |
| Claim 90 (withdrawn) | The method of claim 86, further comprising utilizing a carrier with said growth factor. |
| Claim 91 (withdrawn) | The method of claim 86, further comprising adding an enhancer with said growth factor. |
| Claim 92 (withdrawn) | The method of claim 86, further comprising adding a promoter with said growth factor. |
| Claim 93 (withdrawn) | A method of treating a patient having diabetes comprising inserting a growth factor into an organ to create Islets of Langerhans whereby said patient's insulin production is increased. |

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| Claim 94 (withdrawn) | The method of claim 93, wherein said growth factor comprises a gene. |
| Claim 95 (withdrawn) | The method of claim 93, wherein said organ comprises the pancreas. |
| Claim 96 (withdrawn) | The method of claim 93, wherein said organ comprises the kidney. |
| Claim 97 (withdrawn) | The method of claim 94, wherein said gene comprises Pax-6 initiator gene. |
| Claim 98 (withdrawn) | The method of claim 94, wherein said gene comprises Pax-4 initiator gene. |
| Claim 99 (withdrawn) | The method of claim 94, wherein said gene comprises ISL-1 initiator gene. |
| Claim 100 (withdrawn) | The method of claim 94, wherein said gene comprises NKXGA initiator gene. |
| Claim 101 (withdrawn) | The method of claim 94, further comprising controlling said gene with use of a genetic switch. |
| Claim 102 (withdrawn) | A hybrid, multifunctional organ that has at least one more function than that of a naturally occurring organ. |
| Claim 103 (withdrawn) | The hybrid organ of claim 102 wherein said organ comprises a kidney containing Islets of Langerhans whereby said kidney is capable of producing insulin. |
| Claim 104 (withdrawn) | A method for correcting avascular necrosis in a body of a patient comprising inserting a genetic based material near a joint space to regrow an organ selected from the group consisting of a blood vessel, a bone, and a blood vessel and a bone. |

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| Claim 105 (withdrawn) | The method of claim 104, wherein said organ comprises a blood vessel. |
| Claim 106 (withdrawn) | The method of claim 104, wherein said organ comprises a bone. |
| Claim 107 (withdrawn) | The method of claim 104, wherein said genetic based material comprises a gene. |
| Claim 108 (withdrawn) | The method of claim 107, wherein said gene comprises fibroblast growth factor gene. |
| Claim 109 (withdrawn) | The method of claim 107, wherein said gene comprises transforming growth factor gene. |
| Claim 110 (withdrawn) | The method of claim 107, wherein, said gene comprises VEGF gene. |
| Claim 111 (withdrawn) | The method of claim 107, wherein said gene comprises BMP gene. |
| Claim 112 (withdrawn) | The method of claim 107, wherein said genetic based material comprises a growth factor. |
| Claim 113 (withdrawn) | The method of claim 107, wherein said growth factor comprises VEGF growth factor produced by VEGF genes. |
| Claim 114 (withdrawn) | The method of claim 107, wherein said growth factor comprises BMP growth factor produced by BMP genes. |
| Claim 115 (withdrawn) | The method of claim 104 further comprising strengthening and supporting tissue near said joint space. |
| Claim 116 (withdrawn) | The method of claim 115, wherein said strengthening and supporting is accomplished with a fixation plate. |

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| Claim 117 (withdrawn) | The method of claim 115, wherein said strengthening and supporting is accomplished with a screw. |
| Claim 118 (withdrawn) | A method of growing an organ in a body of a patient comprising inserting a genetic material and a physiological nutrient culture at a specific location of said body to induce the growth of an organ. |
| Claim 119 (withdrawn) | The method of claim 118, wherein said genetic material comprises a gene. |
| Claim 120 (withdrawn) | The method of claim 118, further comprising controlling said gene with use of a genetic switch. |
| Claim 121 (withdrawn) | The method of claim 118, wherein said genetic material comprises a growth factor. |
| Claim 122 (withdrawn) | The method of claim 118 further comprising placing an extracellular matrix around said genetic material. |
| Claim 123 (withdrawn) | A method of growing a suborgan in a body of a patient comprising inserting a genetic material and a physiological nutrient culture at a specific location of said body to induce the growth of a suborgan. |
| Claim 124 (withdrawn) | The method of claim 123, wherein said genetic material comprises a gene. |
| Claim 125 (withdrawn) | The method of claim 124, further comprising controlling said gene with use of a genetic switch. |
| Claim 126 (withdrawn) | The method of claim 123, wherein said genetic material comprises a growth factor. |

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| Claim 127 (withdrawn) | The method of claim 123 further comprising placing an extracellular matrix around said genetic material. |
| Claim 128 (withdrawn) | The method of claim 123, wherein said suborgan comprises a cell. |
| Claim 129 (withdrawn) | The method of claim 128, wherein said cell is an Islet cell. |
| Claim 130 (withdrawn) | The method of claim 123, wherein said suborgan comprises a group of cells. |
| Claim 131 (withdrawn) | The method of claim 130, wherein said group of cells are Islet cells. |
| Claim 132 (withdrawn) | The method of claim 123, wherein said suborgan comprises a neuron. |
| Claim 133 (withdrawn) | The method of claim 123, wherein said suborgan comprises dermis. |
| Claim 134 (withdrawn) | A method of growing an organ comprising inserting genetic material into a cell outside a body to induce and promote morphogenesis and growth of an organ. |
| Claim 135 (withdrawn) | The method of claim 134, wherein said genetic material comprises a gene. |
| Claim 136 (withdrawn) | The method of claim 135, further comprising controlling said gene with use of a genetic switch. |
| Claim 137 (withdrawn) | The method of claim 134, wherein said genetic material comprises a growth factor. |
| Claim 138 (withdrawn) | The method of claim 134, further comprising placing an extracellular matrix around said genetic material. |
| Claim 139 (withdrawn) | The method of claim 134, wherein said cell comprises a group of cells. |

- Claim 140 (withdrawn) The method of claim 139 further comprising utilizing a physiological nutrient culture to promote said morphogenesis and growth of an organ.
- Claim 141 (withdrawn) A method of growing a suborgan comprising inserting genetic material into a cell outside a body to grow a suborgan.
- Claim 142 (withdrawn) The method of claim 141, wherein said genetic material comprises a gene.
- Claim 143 (withdrawn) The method of claim 142, further comprising controlling said gene with use of a genetic switch.
- Claim 144 (withdrawn) The method of claim 141, wherein said genetic material comprises a growth factor.
- Claim 145 (withdrawn) The method of claim 141, further comprising placing an extracellular matrix around said genetic material.
- Claim 146 (withdrawn) The method of claim 141, wherein said cell comprises a group of cells.
- Claim 147 (withdrawn) The method of claim 141 further comprising utilizing a physiological nutrient culture to promote growth of said suborgan.
- Claim 148 (withdrawn) A method of growing a tooth in a mouth of patient comprising creating an implant opening and then inserting an upstream initiator gene into said mouth at said opening to cause said tooth to grow.
- Claim 149 (withdrawn) The method of claim 148, further comprising controlling said initiator gene with use of a genetic switch.

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| Claim 150 (withdrawn) | The method of claim 148 further comprising adding a growth factor at said opening. |
| Claim 151 (withdrawn) | The method of claim 148, wherein said initiator gene comprises Bmp2,4. |
| Claim 152 (withdrawn) | The method of claim 148, wherein said initiator gene comprises EGF. |
| Claim 153 (withdrawn) | The method of claim 148, wherein said initiator gene comprises FGF8. |
| Claim 154 (withdrawn) | The method of claim 148, wherein said initiator gene comprises Lef1. |
| Claim 155 (withdrawn) | The method of claim 148, wherein said initiator gene comprises Msx1. |
| Claim 156 (withdrawn) | The method of claim 148, wherein said initiator gene comprises Msx2. |
| Claim 157 (withdrawn) | The method of claim 148, wherein said initiator gene comprises Shh. |
| Claim 158 (withdrawn) | The method of claim 149, wherein said initiator gene comprises MSX1 and said growth factor comprises BMP2, BMP4, and BMP7. |
| Claim 159 (withdrawn) | The method of claim 148, wherein said upstream initiator gene is contained in a gel carrier. |
| Claim 160 (withdrawn) | The method of claim 149, wherein said growth factor is contained in a gel carrier. |

- Claim 161 (withdrawn) A method of growing a tooth in the mouth of a patient comprising creating an implant opening and then inserting a growth factor into said mouth at said opening to cause said tooth to grow.
- Claim 162 (withdrawn) The method of claim 161, wherein said growth factor comprises a gene.
- Claim 163 (withdrawn) The method of claim 162, further comprising controlling said gene with use of a genetic switch.
- Claim 164 (withdrawn) The method of claim 161, wherein said growth factor is contained in a carrier.
- Claim 165 (withdrawn) A method of forming an organ comprising providing a cell and inserting a gene into said cell to cause said cell to grow into an organ.
- Claim 166 (withdrawn) The method of claim 165, further comprising controlling said gene with use of a genetic switch.
- Claim 167 (withdrawn) The method of claim 165 further comprising obtaining said cell from a patient and placing said organ into the body of said patient.
- Claim 168 (withdrawn) The method of claim 166, wherein said cell is a skin cell.
- Claim 169 (withdrawn) The method of claim 166 further comprising repairing said cell prior to inserting said gene.
- Claim 170 (withdrawn) The method of claim 165 further comprising adding a growth factor prior to inserting said gene.
- Claim 171 (withdrawn) The method of claim 165 further comprising adding a growth factor while inserting said gene.

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| Claim 172 (withdrawn) | The method of claim 165 further comprising adding a growth factor following inserting said gene. |
| Claim 173 (withdrawn) | The method of claim 170, wherein said growth factor comprises extracellular matrix. |
| Claim 174 (withdrawn) | The method of claim 171, wherein said growth factor comprises extracellular matrix. |
| Claim 175 (withdrawn) | The method of claim 172, wherein said growth factor comprises extracellular matrix. |
| Claim 176 (withdrawn) | A method of forming an organ comprising providing a cell and adding a growth factor to said cell to cause said cell to grow into an organ. |
| Claim 177 (withdrawn) | The method of claim 176, wherein said growth factor comprises a gene. |
| Claim 178 (withdrawn) | The method of claim 177, further comprising controlling said gene with use of a genetic switch. |
| Claim 179 (withdrawn) | The method of claim 176 further comprising obtaining said cell from a patient and placing said organ into the body of said patient. |
| Claim 180 (withdrawn) | The method of claim 176, wherein said cell is a skin cell. |
| Claim 181 (withdrawn) | The method of claim 176 further comprising repairing said cell prior to inserting said gene. |
| Claim 182 (withdrawn) | The method of claim 176, wherein said growth factor comprises extracellular matrix. |

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| Claim 183 (withdrawn) | A method of treating autoimmune diseases comprising inserting a growth factor in a body of a patient to control cell migration. |
| Claim 184 (withdrawn) | The method of claim 183, wherein said growth factor comprises extracellular matrix. |
| Claim 185 (withdrawn) | The method of claim 183, wherein said growth factor comprises a gene. |
| Claim 186 (withdrawn) | The method of claim 185, further comprising controlling said gene with use of a genetic switch. |
| Claim 187 (withdrawn) | The method of claim 186, wherein said genetic switch controls cell function. |
| Claim 188 (withdrawn) | The method of claim 186, wherein said genetic switch controls cell growth. |
| Claim 189 (withdrawn) | A method of treating an inflammatory disease comprising inserting a growth factor in a body of a patient to control cell migration whereby inflammatory cell migration into an inflamed area is prevented. |
| Claim 190 (withdrawn) | The method of claim 189, wherein said inflammatory disease is arthritis. |
| Claim 191 (withdrawn) | The method of claim 189, wherein said growth factor comprises extracellular matrix. |
| Claim 192 (withdrawn) | The method of claim 189, wherein said growth factor comprises a gene. |

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| Claim 193 (withdrawn) | The method of claim 190, wherein said growth factor comprises extracellular matrix. |
| Claim 194 (withdrawn) | The method of claim 190, wherein said growth factor comprises a gene. |
| Claim 195 (withdrawn) | A method of restoring the function of an organ that does not operate to a desired capacity comprising inserting a growth factor in an area of the body of a patient to mimic extracellular fluid and improve the capacity thereby of said organ. |
| Claim 196 (withdrawn) | The method of claim 195, wherein said growth factor comprises a cell. |
| Claim 197 (withdrawn) | The method of claim 196, wherein said cell comprises a stem cell. |
| Claim 198 (withdrawn) | The method of claim 195, wherein said growth factor comprises extracellular matrix. |
| Claim 199 (withdrawn) | The method of claim 195, wherein said growth factor comprises a gene. |
| Claim 200 (withdrawn) | The method of claim 195, wherein said growth factor is inserted into said organ. |
| Claim 201 (withdrawn) | The method of claim 195, wherein said growth factor is inserted around said organ. |
| Claim 202 (withdrawn) | The method of claim 195, wherein said growth factor comprises a gene. |
| Claim 203 (withdrawn) | The method of claim 202, further comprising controlling said gene with use of a genetic switch. |

Claims 204-205
(canceled)

- Claim 206 (withdrawn) The method of claim 205, wherein said growth factor comprises a cell.
- Claim 207 (withdrawn) The method of claim 205, wherein said growth factor comprises a gene.
- Claim 208 (withdrawn) The method of claim 205, wherein said growth factor comprises a cell and a gene.
- Claim 209 (withdrawn) The method of claim 204, further comprising reviving a dead portion of said organ by placing a growth factor in said body to grow new arteries at said dead portion of said organ.
- Claim 210 (withdrawn) The method of claim 205, further comprising reviving a dead portion of said organ by placing a growth factor in said body to grow new arteries at said dead portion of said organ.
- Claim 211 (withdrawn) The method of claim 206, further comprising reviving a dead portion of said organ by placing a growth factor in said body to grow new arteries at said dead portion of said organ.
- Claim 212 (withdrawn) A method of replacing a pre-existing organ in a body of a patient comprising placing a growth factor at a desired site of said body to cause said body to grow a new organ and then removing said pre-existing organ thereby permitting said new organ to replace said pre-existing organ.

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| Claim 213 (withdrawn) | The method of claim 212, further comprising placing said new organ at the former site of said pre-existing organ. |
| Claim 214 (withdrawn) | The method of claim 212, wherein said organs comprise hard tissue. |
| Claim 215 (withdrawn) | The method of claim 214, wherein said organs comprise a tooth. |
| Claim 216 (withdrawn) | The method of claim 212, wherein said organs comprise soft tissue. |
| Claim 217 (withdrawn) | The method of claim 216, wherein said organs comprise a heart. |
| Claim 218 (withdrawn) | A method of replacing a pre-existing organ in the body of a patient comprising placing a growth factor at a desired site of said body to form a new organ to replace said pre-existing organ. |
| Claim 219 (withdrawn) | The method of claim 218, wherein said new organ is placed at a site of said the body formerly occupied by said pre-existing organ. |
| Claim 220 (withdrawn) | The method of claim 218, wherein said new organ comprises hard tissue. |
| Claim 221 (withdrawn) | The method of claim 218, wherein said new organ comprises a tooth. |
| Claim 222 (withdrawn) | The method of claim 218, wherein said new organ comprises soft tissue. |
| Claim 223 (withdrawn) | The method of claim 222, wherein said new organ comprises a heart. |
| Claim 224 (withdrawn) | The method of claim 218, wherein said new organ is grown at a first site in said body of said patient that is different from the site of said pre-existing organ and then said new organ is removed from said first site and moved to said site of said pre-existing organ. |

- Claim 225 (withdrawn) The method of claim 224, wherein said new organ comprises hard tissue.
- Claim 226 (withdrawn) The method of claim 225, wherein said organ comprises a tooth.
- Claim 227 (withdrawn) A method of growing an organ and adjacent tissue in a human patient comprising applying genetic material to an area of a human patient to grow an organ and adjacent tissue.
- Claim 228 (withdrawn) The method of claim 227, wherein said genetic material comprises a growth factor.
- Claim 229 (withdrawn) The method of claim 227, wherein said genetic material comprises a gene.
- Claim 230 (withdrawn) The method of claim 227, further comprising said genetic material with use of a genetic switch.
- Claim 231 (withdrawn) The method of claim 229, wherein said gene comprises muscle gene, fat gene, blood vessel gene, and skin gene.
- Claim 232 (withdrawn) The method of claim 231, wherein said skin gene comprises a mesodermal gene.
- Claim 233 (withdrawn) The method of claim 231, wherein said skin genes are applied in the order specified above.
- Claim 234 (withdrawn) The method of claim 231, wherein said genes are applied simultaneously.
- Claim 235 (withdrawn) The method of claim 227, wherein said genetic material is sprayed onto said area.

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| Claim 236 (previously presented) | A method of growing a new portion of a pre-existing heart comprising the steps of placing a growth factor in a body of a human patient and growing new cardiac muscle and growing a new artery in said heart. |
| Claim 237 (canceled) | |
| Claim 238 (previously presented) | The method of claim 237 <u>236</u> , further comprising repairing a dead portion of said heart. |
| Claim 239 (previously presented) | The method of claim 237 <u>236</u> , further comprising repairing a damaged portion of said heart. |
| Claim 240 (withdrawn) | The method of claim 237, wherein said growth factor comprises genetic material selected from the group consisting of a portion of a gene, a gene, a gene product, and an extracellular matrix. |
| Claim 241 (withdrawn) | The method of claim 240, wherein said genetic material comprises a gene. |
| Claim 242 (withdrawn) | The method of claim 241, wherein said gene comprises VEGF. |
| Claim 243 (previously presented) | The method of claim 237 <u>236</u> , wherein said growth factor comprises a member selected from the group consisting of cells, cellular products, and derivatives of cellular products. |
| Claim 244 (previously presented) | The method of claim 243, wherein said growth factor comprises a cell. |
| Claim 245 (previously presented) | The method of claim 244, wherein said cell is multifactorial and non-specific. |
| Claim 246 (previously presented) | The method of claim 245, wherein said cell comprises a stem cell. |

- Claim 247
(previously presented) The method of claim 236, wherein said growth factor is placed in said patient by injection.
- Claim 248
(previously presented) The method of claim 247, wherein said injection is intravenous.
- Claim 249
(previously presented) The method of claim 247, wherein said injection is intraluminal.
- Claim 250
(previously presented) The method of claim 247, wherein said injection is intramuscular.
- Claim 251
(previously presented) The method of claim 236, wherein said growth factor is placed in said patient by a carrier.
- Claim 252
(previously presented) The method of claim 251, wherein said carrier comprises an angioplasty balloon.
- Claim 253
(previously presented) The method of claim 236, wherein said growth factor comprises a gene and a cell.
- Claim 254 (canceled)
- Claim 255 (canceled)
- Claim 256 (canceled)
- Claim 257
(previously presented) The method of claim 236, wherein said growth factor is locally placed in said body.
- Claim 258
(previously presented) The method of claim 238, wherein said growth factor is locally placed in said body.
- Claim 259
(previously presented) The method of claim 239, wherein said growth factor is locally placed in said body.

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| Claim 260 (previously presented) | The method of claim 243, wherein said growth factor is locally placed in said body. |
| Claim 261 (previously presented) | The method of claim 236, wherein said growth factor comprises living stem cells harvested from bone marrow. |
| Claim 262 (previously presented) | The method of claim 238, wherein said growth factor comprises living stem cells harvested from bone marrow. |
| Claim 263 (previously presented) | The method of claim 239, wherein said growth factor comprises living stem cells harvested from bone marrow. |
| Claim 264 (previously presented) | A method of growing a new portion of a pre-existing heart comprising locally placing a growth factor comprising a stem cell in a body of a human patient to grow new cardiac muscle in said heart. |
| Claim 265 (previously presented) | The method of claim 264, wherein said stem cell is placed in said patient by injection. |
| Claim 266 (previously presented) | The method of claim 264, wherein said stem cell comprises living stem cells harvested from bone marrow. |
| Claim 267 (previously presented) | The method of claim 266, wherein said stem cell is placed in said patient by injection. |
| Claim 268 (previously presented) | The method of claim 262, wherein said stem cell is placed in said patient by injection. |
| Claim 269 (previously presented) | The method of claim 263, wherein said stem cell is placed in said patient by injection. |
| Claim 270 (new) | The method of claim 258, wherein said growth factor comprises a cell and said cell is placed adjacent to said dead portion of said heart. |

- Claim 271 (new) The method of claim 259, wherein said growth factor comprises a cell and said cell is placed adjacent to said damaged portion of said heart.
- Claim 272 (new) The method of claim 265, wherein said stem cell is injected into said heart.
- Claim 273 (new) The method of claim 267, wherein said stem cell is injected into said heart.
- Claim 274 (new) The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by intravenous injection.
- Claim 275 (new) The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by intravenous injection.
- Claim 276 (new) The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by intraluminal injection.
- Claim 277 (new) The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by intraluminal injection.
- Claim 278 (new) The method of claim 238, wherein said growth factor comprises a cell and said cell is placed in said body by an angioplasty balloon.
- Claim 279 (new) The method of claim 239, wherein said growth factor comprises a cell and said cell is placed in said body by an angioplasty balloon.
- Claim 280 (new) The method of claim 236 further comprising calculating blood flow through said newly grown artery.
- Claim 281 (new) The method of claim 238 further comprising calculating blood flow through said newly grown artery.

- Claim 282 (new) The method of claim 239 further comprising calculating blood flow through said newly grown artery.
- Claim 283 (new) The method of claim 236 further comprising observing said newly grown artery.
- Claim 284 (new) The method of claim 238 further comprising observing said newly grown artery.
- Claim 285 (new) The method of claim 239 further comprising observing said newly grown artery.
- Claim 286 (new) A method of repairing a dead portion of a pre-existing heart comprising the steps of placing stem cells adjacent said dead portion; forming a new artery in said heart, thereby causing said dead portion of said heart to be repaired.
- Claim 287 (new) A method of repairing a damaged portion of a pre-existing heart comprising the steps of placing stem cells adjacent said damaged portion; forming a new artery in said heart, thereby causing said damaged portion of said heart to be repaired.